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EXAMINER	
TSEGAYE, SABA	

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,019	JALKANEN ET AL.	
	Examiner	Art Unit	
	Saba Tsegaye	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *05/19/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the amendment filed 5/19/05. Claims 1-39 are pending. Currently no claims are in condition for allowance.

Claim Objections

2. Claims 11, 19, 32 and 38 are objected to because of the following informalities: in claims 11 and 32 a period is missing. In claim 19, on of the period should be deleted. Claim 38, line 11, after the word "and" the period should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 1-10, 32 and 37-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 4, the phrase "the Internet" lacks antecedent basis.

In claim 5, lines 8 and 10, it is not clear whether "a network" refers to the same network cited on line 6.

Claim 37, line 4-5, the phrase "the Internet" lacks antecedent basis.

Claim 32, line 6, the phrase "for retransmission to the tag" is confusing.

Claim 38, line 4, the phrase "the Internet" lacks antecedent basis.

Line 6, the phrase "the device" lacks antecedent basis.

Line 11, the phrase "the packetized datagram" lacks antecedent basis.

Lines 8 and 10, it is not clear whether "a network" refers to the same network cited on line 6.

Claim 39, line 3, the phrase " the network" lacks antecedent basis.

Line 8, the phrase " the datagrams" lacks antecedent basis.

Line 9, the phrase " the terminal" lacks antecedent basis.

Line 14, the phrase " the packetized datagram" lacks antecedent basis

Claim Rejections - 35 USC § 102

4. Claims 1, 2, 19-23, 28-33 and 35-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Ramamurthy et al. (US 6,853,294).

Regarding claim 1, Ramamurthy discloses, in Figs. 2 and 3, a Transponder for an RFID system, comprising:

a) a substrate including RF receiving and transmitting means (44) (column 5, lines 10-21);

b) data storage means storing packctized data in standardized and globally addressable data formats transportable in the Internet (TCP format is a standardized and globally addressable data format; see instant Application page 6, lines 5-16) column 5, line 65-column 6, line 14; column 7, lines 11-20) ; and

c) identifying code in the format identifying the data format (the port Number determine the protocol used in the RFID tag; column 7, lines 40-55).

Regarding claim 2, Ramamurthy discloses the transponder of Claim 1 further comprising:

d) signal means responsive to an activation signal for transmitting or receiving and storing packetized data (column 6, lines 60-63).

Regarding claims 19 and 36, Ramamurthy discloses, in Figs. 2 and 3, a method for routing packetized data between a data carrier and destination address comprising:

a) receiving and sending a data packet in a standardized and globally addressable format (TCP format is a standardized and globally addressable data format; see instant Application page 6, lines 5-16) including a header and a payload from and to the data carrier (50) (column 6, line 54-column 7, line 10);

b) identifying a format of the data packet via a code in the data packet (column 7, lines 40-55);

c) processing the data packet according to the identified standardized and globally addressable format after validation of the header (column 7, lines 11-55); and

d) routing the processed data packet directly to a destination address defined in the standardized and globally addressable format (the IP address field and Port Number field enable the RFID reader 40 to route data; column 7, lines 40-55).

Regarding claims 20 and 28, Ramamurthy disclose the method wherein the data packet comprises an identification data, a header data and a payload data, packetized according to any one of several standardized and globally addressable formats (TCP) (column 4, lines 21-32).

Regarding claim 21, Ramamurthy discloses the method wherein the data packet without identification data is transportable in the Internet (column 7, lines 29-33).

Regarding claim 22, Ramamurthy discloses the method wherein the data carrier is an RFID tag (see fig. 3, RFID tag 50).

Regarding claim 23, Ramamurthy discloses the method wherein the destination address is an Internet address or an IP protocol port or both (column 7, lines 23-29).

Regarding claim 29, Ramamurthy discloses the method wherein the header data is standard IP protocol packet header data (column 4, lines 21-32).

Regarding claim 30, Ramamurthy discloses the method wherein the routed packets can be directed to a network or an application within the device with respective to the standardized and globally addressable format (column 6, lines 26-35).

Regarding claim 31, Ramamurthy discloses the method wherein the network can be an external network (e.g. the internet) or a local network (such as a personal area network, or a local area network) (column 6, lines 26-35).

Regarding claim 32, Ramamurthy discloses a method for writing a packetized data to a data carrier, where the data carrier is an RFID tag, comprising:

determining if a tag is writeable, and if so, alerting and application program executable in mobile device or a network to prepare to transmit data after a reader completes a handshake with the tag (column 5, lines 1-10; column 6, line 54-column 7, line 10);

transmitting the data to the reader from the application program for retransmission to the tag (column 4, line 56-column 5, line 10);

appending a RFID header to the data;

receiving and storing the transmitted data in the tag which may include over-wiring the data in an erasable read-only memory included in the tag (column 5, line 22-column 6, line 14); and

transmitting an acknowledgment signal to the application via the reader (TCP represents a common connection-oriented protocol and expects an acknowledgment from the receiving node).

Regarding claim 33, Ramamurthy discloses, in Figs 1-3 and 5, a system for routing packetized data comprising:

a) at least one data carrier (RFID tag 50) having at least one data packet embedded therein in a standardized and globally addressable format;

b) a data receiving (reading) device or data sending (writing) device (RFID reader 40) for receiving or sending the at least one embedded data packet from the said at least one data carrier (column 6, line 54-column 7, line11);

c) a data routing device (server 22) connectable to the data-receiving device (40) for routing the received data packet directly to a destination address (column 4, lines 2-11; column 7, lines 51-55); and application in the data receiving device receptive to the standardized and globally addressable format for receiving the routed data packet (column 3, lines 55-61).

Regarding claim 35, Ramamurthy discloses the method wherein the at least one data packet is transportable in Internet (column 3, lines 34-39).

Regarding claim 37, Ramamurthy discloses, in Figs. 2 and 3, a Transponder for an RFID system, comprising:

a) a substrate including RF receiving and transmitting means (44 provides for RF communications to/from the RFID tags; and RFID 40 may have a hard-wired link to the server computer 22 or alternatively, may communicate over an RF) (column 4, lines 36-38; column 5, lines 10-21);

b) data storage means storing packctized data in standardized and globally addressable data formats transportable in the Internet (TCP format is a standardized and globally addressable data format; see instant Application page 6, lines 5-16) column 5, line 65-column 6, line 14; column 7, lines 11-20);

c) identifying code in the format identifying the data format (the port Number determine the protocol used in the RFID tag; column 7, lines 40-55); and

d) the transmitting means transmitting the packetized data to an application for routing without alteration of packet (see fig. 4; column 6, lines 15-35).

Claim Rejections - 35 USC § 103

5. Claims 3 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramamurthy et al. in view of Ramberg et al. (US 6,857,013).

Ramamurthy discloses all the claim limitations as stated above. Further, Ramamurthy discloses that each packet communicated using the TCP/IP protocol includes a header portion that contains the TCP and IP information (which is a standardized and globally addressable data format; see instant Application page 6, lines 5-16). However, Ramamurthy does not disclose wherein the packetized datagram is in UDP or combined UDP/IP format.

Ramberg teaches a plurality of automatic data collection device platforms that equipped with RF tag readers and operates under different protocols. In each ADC device platform a simple network management protocol master agent communicates with a remote computing system using sockets TCP and UDP. UDP is part of the TCP/IP protocol suite. Furthermore, UDP is a connectionless protocol parallel to TCP in the IP communication stack (column 9, lines 15-39, column 12, lines 50-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ramamurthy's apparatus to utilize a system where the packetized datagram is in UDP or combined UDP/IP format, as taught by Ramberg. The motivation is that UDP is a connectionless type protocol for providing more efficient transport protocol for communicating data to many destinations. UDP is a simpler protocol that includes fewer handshakes than TCP and thus it is more efficient use of available bandwidth.

6. Claims 5, 6, 11-17 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramamurthy et al. in view of Gershman et al. (US 6,705,522 B2).

Regarding claims 5, 11 and 39, Ramamurthy discloses, in Figs. 2 and 3, a RFID system, comprising:

a) signal apparatus (40) transmitting activation signals and sending/receiving packetized datagrams in standardized and globally addressable data formats transportable in (TCP format is a standardized and globally addressable data format; see instant Application page 6, lines 5-16) in a distributed information system comprising the Internet to/from at least one transponder (50) (column 5, lines 10-39; line 65-column 6, line 14);

b) a communication protocol stack processing and routing packetized datagrams within the device or to a network (column 5, line 40-column 6, line 14);

c) stored programs operating the device in the RFID system and implementing communications within network (column 4, line 60-column 5, line 10; column 6, lines 15-41); and

d) reading apparatus processing packetized datagrams from a transponder for delivery to a network or application in a standardized and globally addressable data format (column 5, lines 40-64).

Further, Ramamurthy discloses that the RFID reader 40 may communicate over an RF with server computer 22 and the invention would be equally applicable to a hand held reader (column 4, lines 50-54). However, Ramamurthy does not disclose a mobile device.

Gershman teaches a mobile transceiver unit that transmits and receives to/from RFID tag 204.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute a mobile device, such as that suggested by Gershman, to the RFID reader of Ramamurthy. The motivation is more flexible and efficient system that will require less number of fixed RFID readers.

Regarding claim 6, Ramamurthy discloses the mobile device of Claim 5 further comprising:

e) at least one application stored in the device and responsive to the packetized data (column 6, lines 15-41).

Regarding claim 12, Ramamurthy discloses the RFID system wherein the reader (40) is located in the network (see Fig. 1).

Regarding claim 13, Ramamurthy discloses the RFID tag contains a space for data storage having plural fields that may be defined by an end user of the automated data collection system. Further, Ramamurthy discloses that the RFID 40 determines whether a detected response was valid i.e., whether a response signal originated from an RFID tag 14 or was an erroneous noise signal (column 7, lines 2-39 (As known, TCP provides error checking and delivery guarantees)).

Regarding claim 14, Ramamurthy discloses the RFID system wherein the communication protocol stack requests a re-transmission from the transponder if the checksum if not valid (column 7, lines 4-11 (as known, TCP includes a sequence number to each byte transmitted and expects a positive acknowledgment form the receiver; if the ACK is not received the data is re-transmitted).

Regarding claim 15, Ramamurthy discloses that the reader 40 makes as determination as to whether a detected response was valid. If the response is determined to be not valid, the reader

40 transmits another interrogation field on a periodic basis. However, Ramamurthy does not expressly disclose dropping the packetized datagram if the retransmission is unsuccessful.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a method that drops the packetized datagram if the retransmission is unsuccessful to the retransmission method of Ramamurthy. One of ordinary skill in the art would have been motivated to do this because it would avoid endless re-transmission loops.

Regarding claim 16, Ramamurthy discloses the RFID system wherein the communication protocol stack transmits the packetized datagram to an application running in the terminal or to an application running in the network (column 7, lines 12-39).

Regarding claim 17, Ramamurthy discloses the RFID system wherein the communication protocol stack parses a header in the packetized datagram and routes the packetized datagram to a destination identified in the header if a checksum in the packetized datagram is valid (column 7, lines 12-39).

7. Claims 4, 25-27 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramamurthy et al in view of Ramberg as applied to claims 1 and 3 above, and further in view of Koodli (US 6,608,841).

Ramamurthy discloses all the claim limitation as stated above except for wherein the packetized data at least partly compressed and wherein the processing comprises decompressing received header data.

Koodli teaches a header compression mechanism that is provided with a compressor/de-compressor for compressing headers of UDP/IP datagrams to reduce header-overhead (column 3, lines 31-40).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ramamurthy in view of Ramberg apparatus to utilize the header with at least partly compressed and the processing comprises decompressing received header data, as taught Koodli. The motivation is more reduced header overhead that allows efficient use of bandwidth on low and medium speed links.

8. Claims 7-10, 18 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramamurthy et al. in view of Gershman et al. as applied to claims 5 and 11 above, and further in view of Ramberg et al. (US 6,857,013) and Koodli (US 6,608,841).

Regarding claims 7, 8, 10, 18 and 38, Ramamurthy in view of Gershman discloses all the claim limitations as stated above. Further, Ramamurthy discloses that each packet communicated using the TCP/IP protocol includes a header portion that contains the TCP and IP information. However, Ramamurthy does not disclose wherein the packetized datagram is in UDP or combined UDP/IP format.

Ramberg teaches a plurality of automatic data collection device platforms that equipped with RF tag readers and operates under different protocols. In each ADC device platform a simple network management protocol master agent communicates with a remote computing system using sockets TCP and UDP. UDP is part of the TCP/IP protocol suite. Furthermore,

UDP is a connectionless protocol parallel to TCP in the IP communication stack (column 9, lines 15-39, column 12, lines 50-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ramamurthy's apparatus to utilize a system where the packetized datagram is in UDP or combined UDP/IP format, as taught by Ramberg. The motivation is that UDP is a connectionless type protocol for providing more efficient transport protocol for communicating data to many destinations. UDP is a simpler protocol that includes fewer handshakes than TCP and thus it is more efficient use of available bandwidth.

Further, Ramamurthy in view of Gershman and Ramberg does not disclose the header with at least partly compressed or shortened or omitted fields and decompressing or expanding header.

Koodli teaches a header compression mechanism that is provided with a compressor/de-compressor for compressing headers of UDP/IP datagrams to reduce header-overhead (column 3, lines 31-40).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ramamurthy in view of Gershman and Ramberg apparatus to utilize the header with at least partly compressed and decompressing, as taught Koodli. The motivation is more reduced header overhead that allows efficient use of bandwidth on low and medium speed links.

Regarding claim 9, Ramamurthy discloses parsing means processing datagrams for transmission to the network (column 4, lines 21-32).

Response to Arguments

9. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

10. Applicant argues that Ramamurthy fails to disclose storing standardized and globally addressable packet in an RFID tag. Examiner respectfully disagrees. Ramamurthy discloses that each data packet communicated using a TCP/IP protocol includes a header portion that contains the TCP and IP information. As known, TCP format is a standardized and globally addressable format (see instant application page 6, lines 5-16; "standardized and globally addressable formats such as e.g. UDP, IPv6, TCP... and **the like**...").

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
August 26, 2005

JOHN PEZZLO
PRIMARY EXAMINER